Department of Energy
Office of the Assistant General Counsel for Civilian Nuclear Programs

Comments on August 31, 2010 (Revised November 12, 2010), Report on "Federal Commitments Regarding Used Fuel and High-Level Wastes"

The Department of Energy's Office of the Assistant General Counsel for Civilian Nuclear Programs has reviewed the August 31, 2010 (revised November 12, 2010) report entitled "Federal Commitments Regarding used Fuel and High-Level Wastes" (Report) prepared by Van Ness Feldman, P.C. for the Blue Ribbon Commission on American's Nuclear Future. Based on that review, we wish to clarify a few matters about the nature and extent of the Federal commitments (as well as a few related issues) in order to avoid any potential misunderstandings.

We have limited our comments to matters of most relevance to the issue of disposal of high-level waste (HLW) and used fuel, and our lack of comments as to other statements in the Report do not necessarily constitute agreement with those statements. We hope that these clarifications are helpful to the Commission.

DOE's Obligations/Commitments

Some of the Report's statements regarding DOE's commitments and obligations regarding waste disposal may leave the Commission with an inaccurate impression.

For instance, the Report incorrectly states that, among other things, the West Valley Demonstration Project Act of 1980 makes the Department of Energy responsible for the disposal of waste solidified at West Valley in New York.[1] While the West Valley Demonstration Act obligates DOE to dispose of the low level radioactive and transuranic waste resulting from the solidification of the HLW under the project,[2] it does not require DOE to dispose of the HLW and in fact is explicit that it does not authorize DOE to take title to such waste.[3] Under the Nuclear Waste Policy Act of 1982, as amended (NWPA), the Department has no obligation to dispose of this waste or authority to take title to this waste until after the State of New York enters into a disposal contract with the Department and pays the necessary disposal fees for deposit into the Nuclear Waste Fund.[4] Thus, any obligation that the Department of Energy has to dispose of the

[1] Report at 24 ("The [West Valley Demonstration] Act made DOE responsible for solidifying the HLW, *disposing of the solidified waste*, and decommissioning the facilities used in the process.") (emphasis added).

[2] West Valley Demonstration Act § 2(a)(4), Pub. L. 97-90, 95 Stat. 1171, 42 U.S.C. § 2021a ("The Secretary shall, in accordance with applicable licensing requirements, dispose of low level radioactive waste and transuranic waste produced by the solidification of the high level radioactive waste under the project.").

[3] *Id.* § 5(b) ("This Act does not authorize the Federal Government to acquire title to any high level radioactive waste at the Center or to the Center or any portion thereof.").

[4] Nuclear Waste Policy Act §302(a)(1), 42 USC § 10222 ("the Secretary is authorized to enter into contracts with any person who generates or holds title to high-level radioactive waste … for the acceptance of title, subsequent

solidified HLW from the West Valley Demonstration Project is contingent upon the State of New York signing a disposal contract and paying the appropriate amount of fees for deposit into the Nuclear Waste Fund. Only after these conditions have been satisfied would the Department be able to take title to the solidified HLW and be responsible for its disposal as well as its transportation to a disposal site.[5]

In the same vein, the Report may leave a misimpression regarding DOE's obligations as to used fuel at the Fort St. Vrain site in Colorado. The Report confuses the Department's court-ordered obligations to remove used fuel from the State of Idaho with its commitment to remove used fuel from the State of Colorado. Specifically, the Report states that, "[A]greements applicable to DOE facilities in Colorado and Idaho require removal of used fuel from the state by 2035."[6] The Report cites the Batt Settlement Agreement as support for this assertion. While the Batt Settlement Agreement, as embodied in the concomitant Consent Order dated October 17, 1995,[7] does assign obligations to the Department of Energy, these obligations under the Batt Settlement Agreement do not include the removal of used fuel from the State of Colorado. Although there is no court order requiring the Department to remove used fuel from the State of Colorado, the Department is nevertheless committed to doing so and has conveyed this to the State of Colorado by a separate agreement that is unrelated to the Batt Settlement Agreement.[8] The agreement with the State of Colorado, however, does not create a legally enforceable obligation to remove fuel from Colorado by 2035 or any other date. To be sure, the agreement does provide for possible monetary compensation in the event fuel is not removed by 2035, but only if Congress appropriates funds for this purpose.[9]

Additionally, the Report incorrectly suggests (at page 23) that, at DOE's Savannah River Site, "[t]he Site Treatment Plan requires all tank waste be removed from canisters by 2028." In fact,

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transportation, and disposal of such waste or spent fuel. Such contracts shall provide for payment to the Secretary of fees pursuant to paragraphs (2) and (3) … .").

[5] *See* West Valley Demonstration Act § 2(a)(3), Pub. L. 97-90, 95 Stat. 1171, 42 U.S.C. § 2021a ("The Secretary shall, as soon as feasible, transport, in accordance with applicable provisions of law, the waste solidified at the Center to an appropriate Federal repository for permanent disposal.").

[6] Report at 2.

[7] *Available at*: http://www.em.doe.gov/pdfs/2001_Agreements/Colorado_vs_Batt_10-16-95.pdf.

[8] Agreement Between The Department of Energy and The State of Colorado Regarding the Shipping of Spent Nuclear Fuel Out of Colorado (February 1, 1996).

[9] *Id*, § A ("In the event the Department does not remove all the spent fuel located at Fort St. Vrain from Colorado by January 1, 2035, then, subject to the availability of appropriations provided in advance for this purpose, the Department will provide annual funding to the State of Colorado in the amount of $15,000 for each day after January 1, 2035, until the fuel is removed.").

the requirement is for DOE to maintain HLW canister production at the Defense Waste Processing Facility (DWPF) "sufficient to remove all waste from tanks by 2028."[10]

More generally, the statement on page 5 of the Report that "[i]n addition to DOE's obligations related to HLW and used fuel, some special nuclear materials, including plutonium and uranium, may require storage in a geologic repository" is not entirely accurate. The only document cited in the related discussion on page 25 – Status Report 2009 – does not support the conclusion that "[d]epending on DOE's final decisions for treating these materials, some or all of these materials may require permanent storage in a geologic repository." In fact, although there are several options under consideration for disposition of the surplus non-pit plutonium that is being consolidated at SRS pending disposal, [11] direct disposal in a geologic repository is not one of them. Moreover, there is no requirement that these materials be disposed of in a geologic repository. Similarly, there is no requirement to dispose of depleted uranium in a geologic repository. DOE's depleted uranium is planned for conversion to uranium oxide to facilitate disposal as low-level waste or for reuse.[12] Even if left unconverted, depleted uranium can be disposed of as low-level waste and therefore would not require disposal in a geologic repository.[13] Even as to highly enriched uranium, only some of that material – in particular, the highly enriched uranium contained in spent fuel assemblies that is not separated and blended down to low-enriched uranium – could require disposal in a geologic repository, because it would remain in the spent nuclear fuel.[14]

Transportation

The Report also may leave a misimpression regarding whether transportation of used fuel and HLW to a repository is subject to regulation by the Nuclear Regulatory Commission (NRC) and the Department of Transportation (DOT). For example, on page 6, the Report states that "DOE transportation of used fuel and HLW is governed by a number of Federal, state, and local statutes and regulations. The principal regulatory agencies for the transportation of used fuel and HLW

[10] Updated Status Report, page 25. We also note that the Report incorrectly cited to page 32 of the Updated Status Report on this point. Additionally, the discussion of DOE obligations at the Hanford, Washington site in Table 3, page 4 of the Report needs to be updated. There is no longer any "pending DOE change request" concerning the matters discussed.

[11] Amended Notice of Intent to Modify the Scope of the Surplus Plutonium Disposition Supplemental Environmental Impact Statement and Conduct Additional Public Scoping, 75 Fed. Reg. 41850 (July 19, 2010).

[12] Record of Decision for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, OH, Site, 69 Fed. Reg. 44649 (July 27, 2004), and Record of Decision for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, KY, Site, 69 Fed. Reg. 44654 (July 27, 2004).

[13] "Depleted uranium is source material . . . and if treated as a waste would fall under the definition of low-level radioactive waste under 10 CFR 61.55(a)." Notice of Public Workshop on a Potential Rulemaking for Safe Disposal of Unique Waste Streams Including Significant Quantities of Depleted Uranium, 74 Fed. Reg. 30175, 30176 (June 24, 2009).

[14] Also, on page 28 of the Report in the discussion of domestic research reactors, it should be noted that DOE does not accept "waste" from such reactors, but only spent fuel. *See* 61 Fed. Reg. 25092 (May 17, 1996).

are [DOT] and the NRC." Similar statements are also made in Section IV.B.1. on page 28. In fact, section 180 of the NWPA requires that used fuel and HLW be transported to a repository or Monitored Retrievable Storage facility in *packages* certified by the NRC and that DOE follow the NRC regulations regarding advance *notification* of State and local governments.[15] It does not require that the shipments themselves – that is, the transportation of the material – be licensed or otherwise approved by NRC or DOT.

In this regard, section 202 of the Energy Reorganization Act of 1974 (ERA) provides NRC with licensing and related regulatory authority over certain specified DOE facilities, but not over transportation.[16] Similarly, pursuant to the Hazardous Materials Transportation Act and its implementing regulations, DOT has regulatory authority over the *commercial* transportation of hazardous materials, including radioactive materials.[17] However, DOE has broad authority under the Atomic Energy Act of 1954, as amended (AEA), to specify the requirements for all aspects of activities involving radioactive materials that are undertaken by DOE or on its behalf, including the transportation of radioactive materials.[18] DOE has exercised this authority with respect to certain DOE shipments, such as shipments undertaken by governmental employees or shipments involving special circumstances, by adopting the relevant NRC and DOT requirements for similar commercial shipments.[19]

To be sure, in many cases, DOE utilizes commercial carriers that undertake shipments of DOE material as commercial shipments. These shipments are subject to regulation by DOT and other entities as appropriate. Even where DOT and NRC do not have authority however, all DOE shipments are undertaken in accordance with the requirements and standards that apply to comparable commercial shipments, except where there is a determination that national security or another critical interest requires different action.[20] In all cases, DOE policy is to achieve a

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[15] *See* 42 U.S.C. § 10175 ("(a) Packaging[.] No spent nuclear fuel or high-level radioactive waste may be transported by or for the Secretary … except in packages that have been certified for such purpose by the Commission. … (b) Advance notification[.] The Secretary shall abide by regulations of the Commission regarding advance notification of State and local governments prior to transportation of spent nuclear fuel or high-level radioactive waste … .").

[16] Except as otherwise provided in the ERA, all functions of the Atomic Energy Commission under the Atomic Energy Act of 1954, as amended (AEA), were transferred to the Energy Research and Development Administration (ERDA). 42 U.S.C. § 5814. ERDA was subsequently terminated, and its functions were transferred to DOE by the Department of Energy Reorganization Act in 1977. 42 U.S.C. § 7151. *See also* Letter from Richard A. Meserve, Chairman, NRC, to Richard J. Durbin, Senator, U.S. Senate (May 10, 2002), *available at*: http://www.state.nv.us/nucwaste/news2002/nn11771.pdf.

[17] 49 U.S.C. § 5103; 49 C.F.R. § 171.1.

[18] *See* 42 U.S.C. § 2011 et seq; *see also Radioactive Material Transportation Practices Manual* (Transportation Manual), DOE M 460.2-1A, p. 2, *available at*: https://www.directives.doe.gov/directives/current-directives/460.2-DManual-1a/view?searchterm=None.

[19] *Id.*

[20] *Id.*

level of protection that meets or exceeds the level of protection associated with comparable commercial shipments.[21]

In this regard, we would note that the DOE's program for transportation of these materials has led to an exemplary safety record. Used fuel has been shipped safely and securely for many decades, with more than 70,000 metric tons of used fuel having been safely transported worldwide to date.[22] Since the early 1960s, more than 3,000 shipments of commercial used fuel have been conducted safely and securely in the United States, having traveled more than 1.7 million miles.[23] In all that time, there has never been a used fuel transportation accident that resulted in any release of radioactive material harmful to the public or the environment.[24]

Authority of Other Federal Agencies

The statement on page 8 of the Report that "[t]he NWPA extended authority over the permanent nuclear waste repository to several other Federal agencies" is not accurate. As a general matter, the NWPA did not grant any federal agency additional authority over a permanent nuclear waste repository. For example, the NRC already had licensing authority over DOE facilities for the long-term disposal of used fuel and HLW under section 202 of the Energy Reorganization Act.[25] The NWPA thus specified the manner in which that authority could be exercised.

Additionally, while the Report is correct that section 121 of the NWPA provides that EPA promulgate generally applicable standards for protection of the general environment from offsite releases from radioactive material in repositories, these standards were to be issued under existing authority.[26] In addition, the report fails to note section 801 of the Energy Policy Act of 1992, which supersedes section 121 and requires EPA to use its existing authority to establish site-specific standards for releases from radioactive materials stored or disposed of in the repository at the Yucca Mountain site.[27]

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[21] *Id.*

[22] *National Transportation Plan* (NTP), Office of Civilian Radioactive Waste Management, DOE/RW-0603, p. 1 (January 2009), *available at*: http://www.westgov.org/wieb/radioact/doi/01-09NTP.pdf.

[23] *Id*. at pp. 1-2.

[24] *Id*. at p. 2.

[25] 42 U.S.C. § 5842 ("the Nuclear Regulatory Commission shall … have licensing and related regulatory authority … as to … (3) Facilities used primarily for the receipt and storage of high-level radioactive wastes … .").

[26] 42 U.S.C. § 10141 ("(a) … the [EPA] Administrator, *pursuant to authority under other provisions of law*, shall, by rule, promulgate generally applicable standards for protection of the general environment from offsite releases from radioactive material in repositories.") (emphasis added).

[27] Pub. L. 102-486, 106 Stat. 2921, 42 U.S.C. § 10141 ("(a) … Notwithstanding the provisions of section 121(a) of the Nuclear Waste Policy Act of 1982 … the [EPA] Administrator shall, based upon and consistent with the findings and recommendations of the National Academy of Sciences, promulgate, by rule, public health and safety standards for protection of the public from releases from radioactive materials stored or disposed of in the repository at the Yucca Mountain site.").

Also, the statement on page 8 of the Report that "[s]iting guidelines governing the repository are also the responsibility of EPA, subject to approval by the NRC" (citing section 112 of the NWPA) is not correct. Section 112 of the NWPA makes the Secretary of Energy, not EPA, responsible for issuing siting guidelines, following consultation with the EPA and others and concurrence by NRC.[28]

DOE's Obligations Under Standard Contracts

In some places, the Report suggests that DOE was obligated to take title to used fuel and HLW and dispose of such material in a permanent repository by January 31, 1998.[29] In fact, January 31, 1998 was the deadline for DOE to begin to "*dispose*" of used fuel and HLW in return for the payment of fees by the contract holder.[30] DOE's obligation to take title (and to begin delivery to and disposal of such material in a permanent repository) does not arise until commencement of operation of a repository.[31]

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[28] *See* 42 U.S.C. § 10132 ("the Secretary, following consultation with the Council on Environmental Quality, the Administrator of the Environmental Protection Agency, the Director of the Geological Survey, and interested Governors, and the concurrence of the Commission shall issue general guidelines for the recommendation of sites for repositories.")

[29] *See* Report at 9 ("the terms of the original Standard Contract obligate DOE to take title to used fuel and HLW beginning 'not later than January 31, 1998.'"); Report at 12 ("DOE's failure to meet the statutory and contractual deadlines to begin accepting used fuel and HLW for delivery and disposal in the permanent repository no later than January 31, 1998, has resulted in a wave of lawsuits and in a wave of settlements, along with a continually increasing financial liability for the Federal Government.").

[30] NWPA, sec. 302(a)(5)(B), 42 U.S.C. § 10222(a)(5)(B) ("in return for the payment of fees established by this section, the Secretary, beginning not later than January 31, 1998, will dispose of the high-level radioactive waste or spent nuclear fuel involved as provided in this subtitle.").

[31] NWPA, sec. 302(a)(5)(A), 42 U.S.C. § 10222(a)(5)(A) ("following commencement of operation of a repository, the Secretary shall take title to the high-level radioactive waste or spent nuclear fuel involved as expeditiously as practicable upon the request of the generator or owner of such waste or spent fuel;"); *Indiana Michigan Power Co. v. Dept. of Energy*, 88 F.3d 1272, 1276 (D.C. Cir. 1996) ("Sections 302(a)(5)(A) and (B) [of the NWPA] clearly set forth two independent requirements. The duties imposed on DOE under subsections (A) and (B) are linked to different events and are triggered at different times. DOE's duty under subsection (A) to take title to the SNF is linked to the commencement of repository operations and is triggered when a generator or owner of SNF makes a request to DOE. DOE's duty under subsection (B) to dispose of the SNF is conditioned on the payment of fees by the owner and is triggered, at the latest, by the arrival of January 31, 1998.").